

Name: \_\_\_\_\_

**p1105: Factoring when  $a = 1$  (v10)**

**Example:** Factor  $x^2 + 5x - 24$

Find two numbers whose product is  $-24$  and whose sum is  $5$ . Focus on finding factor pairs of  $-24$ . Eventually you consider  $8$  and  $-3$  because  $(8)(-3) = -24$ . You verify this pair is correct because  $(8) + (-3) = 5$ . Thus, your answer:

$$(x + 8)(x - 3)$$

1. Factor  $x^2 - x - 42$

2. Factor  $x^2 - 10x + 16$

3. Factor  $x^2 + 11x + 18$

4. Factor  $x^2 - 3x + 2$

5. Factor  $x^2 + 2x - 48$

6. Factor  $x^2 + 10x + 9$

7. Factor  $x^2 - 9x + 8$

8. Factor  $x^2 - 8x + 15$

9. Factor  $x^2 + 6x - 27$

10. Factor  $x^2 - 4x - 45$

11. Factor  $x^2 + 4x + 3$

12. Factor  $x^2 - 81$

13. Factor  $x^2 - 2x - 3$

14. Factor  $x^2 - 3x - 40$

15. Factor  $x^2 - 13x + 36$